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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/780,766	02/09/2001	Kristopher K. Neild	TI-30306	6614

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EXAMINER

THAI, LUAN C

ART UNIT PAPER NUMBER

2827

DATE MAILED: 08/14/2002

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/780,766

Applicant(s)

NEILD ET AL.

Examiner

Luan Thai

Art Unit

2827

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-15 is/are pending in the application.
- 4a) Of the above claim(s) 14 and 15 is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-3 and 9-11 is/are rejected.
- 7) ☒ Claim(s) 4-8, 12 and 13 is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 09 February 2001 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on ____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. ____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892) 4) ☐ Interview Summary (PTO-413) Paper No(s). ____.
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948) 5) ☐ Notice of Informal Patent Application (PTO-152)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) ____ 6) ☐ Other: ____.

DETAILED ACTION

Election/Restriction

1. Applicant's election with traverse of group I, claims 1-13 in Paper No. 4 filed May 24, 2002 is acknowledged. The traversal is on the ground(s) that the product and process patent claims should be prosecuted as part of the same patent application because of the close interrelationship between the product and the process patent claims. This is not found persuasive because these inventions are distinct for the reasons as previous mentioned on Election/Restriction paper dated 04/18/02 and have acquired a separate status in the art as shown by their different classification, restriction for examination purposes as indicated is proper. Furthermore, the examiner respectfully submits that searching/examining the Group II method invention in addition to the elected Group I device invention would, in fact, be more than a slight added burden.

The requirement is still deemed proper and is therefore made FINAL.

Drawings

2. The drawings are objected to under 37 CFR 1.83(a). The drawings must show every feature of the invention specified in the claims. Therefore, the limitations "a circuit board" in claim 1, "said geometrical features are dimples" in claim 10, and "a plurality of plastic frame parts" in claim 11 must be shown or the feature(s) canceled from the claim(s). No new matter should be entered.

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claims 1-3 and 9-11 are rejected under 35 U.S.C. 103(a) as being unpatentable over D'Amico (5,221,209) in view of Vratny (Reg. Number: H13).

The figures and reference numbers referred to in this office action are used merely to indicate an example of a specific teaching and are not to be taken as limiting.

Regarding claims 1-3, D'Amico disclose (see specifically figures 8A-8C) a header 12 for connecting an electronic components board 14 to a circuit board (PCB), comprising: a plurality of sidewalls joined together to form a planar frame around an area substantially the same as the area of the components board, the frame having first and second surfaces; a plurality of geometric features 41/43 in the first surface, suitable for aligning the frame to the component board; selected sidewalls having a plurality of openings 34 (see figures 2A-2B) extending from the first to the second surface; a plurality of metal pins 18-20-22-24 intended for assembly to the circuit board, each of the pins having a first end and a second end; the first end of each of the pins located in one of the openings, respectively, such that it extends a pre-determined length from the first surface, the length equal for each of the pins; and the second end of each of the pins protruding from the second surface. D'Amico does not explicitly disclose the sidewalls 12

being made of plastic. (Note that the elements 50-46, disclosed in D'Amico's figures 2A, 3Aa-3E, can be considered as the claimed "pins").

Plastic, however, is a well-known material in the art for making the sidewalls, as disclosed by Vratny (Col. 3, lines 51+). It would have been obvious to one of ordinary skill in the art at the time the invention was made to use plastic for forming the sidewalls in D'Amico's structure, since it has been held to be within the general skill of a worker in the art to select a known material on the basis of its suitability for the intended use as a matter of obvious design choice.

In re Leshin, 125 USPQ 416.

Regarding claims 9-10, D'Amico further discloses the geometrical features being bumps 43 or dimples 41 (see figure 2A).

Regarding claim 11, D'Amico further discloses a plurality of frame parts 42 spacing the header from the circuit board.

Allowable Subject Matter

5. Claims 4-8 and 12-13 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

6. The following is an examiner's statement of reasons for allowance: none of the prior art whether taken singularly or in combination, especially when these limitations are considered within the specific combination claimed, to teach:

a) the first ends of the pins protrude a length of about 0.3 to 0.4 mm, as recited in claim 4;


- b) the first ends of the pins having surfaces wettable by solder;
- c) the plastic material of the frame being DMS Stanyl TE250F6;
- d) the sidewalls thickness being in the range from about 0.9 to 1.2 mm for sidewalls without pin openings, and from 2.7 to 3.0 mm for sidewalls with pin openings; and
- f) a tab attached to the sidewalls for handling the frame by pick-and-place machines and removable after the handling.

7. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Luan Thai whose telephone number is (703) 308-1211. The examiner can normally be reached on 7:00 AM - 4:00 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David L. Talbott can be reached on (703) 305-9883. The fax phone numbers for the organization where this application or proceeding is assigned are (703) 308-7722 for regular communications and (703) 308-7724 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-0956.

Luan Thai
August 9, 2002


Kameo
Primary Examiner